Rust Resistant Indiangrass Screening

Rust is a common fungal pathogen that attacks many warm season grasses, lowering productivity and increasing the stress on the plant. In extreme cases, especially when coupled with other environmental stresses such as drought, it can lead to stand reduction and death. The East Texas Plant Materials center recently screened through a collection of Indiangrass from the Native Prairie Association of Texas, NPAT. Many of the plants in this collection were highly susceptible to rust, however some of the plants exhibited little to no infection. The best 23 of the "resistant" plants were collected. Portions of the plant were dug up from the NPAT field and split in to 4, 5x5 inch plugs. This material was then planted into a new field in a completely randomized block design consisting of 4 replications. 'Lometa' Indiangrass and a severely infected plant from the NPAT collection were added to the experiment as controls. A border of highly rust susceptible plants was also planted around the experiment. This was done to eliminate edge effect and to ensure the rust pathogen was present in the newly established field. Data from this experiment will be analyzed to select a rust resistant plant for release in the ETPMC service area. The best material from this study will be kept in a breeding program for recurrent selection for vigor and resistance to the rust pathogens.